

Excerpt From: Semi-Annual Progress Report

Grant Number: NMF4540101 NOAA-NMFS-SE-2010-2001762
Project Title: Engineering By Catch Reduction in West Indian Fish Traps
Grantee: St. Thomas Fishermen's Association
Award Period: 1 August 2010 to 31 July 2011
Period Covered by this Report: 1 August 2010 to 31 January 2011

G. Summary of Progress to Date:

- 1) Work Accomplishments: Describe tasks accomplished this period.
 - a) Project Approval:
 - i) Applied for and received permit from VI Dept. Planning and Natural Resources.
 - ii) Finalized data base design
 - iii) Fish traps: Purchased materials and constructed 60 fish traps.
 - b) NOAA Dive Team
 - i) NOAA collaborator (R. Hill) obtained funding from the *NOAA Coral Reef Conservation Program* to do additional experimental studies to complement work planned under this project. Initial joint activities included visiting Saturday fish markets to obtain length, width, and height measurement for representative catch.
 - ii) NOAA Dive Team worked with a grad student researcher from UVI (G. Renchen), studying derelict traps as marine debris, to observe behavior of fish inside traps. Information on the in-trap locations where different species spend their time will be used in vent placement for further experimental designs.
 - iii) NOAA Dive Team deployed a subset of traps in Brewers Bay to observe additional fish behavior and observed fish in traps that were being hauled. Fish utilized in these parts of the studies were obtained from an STFA fisherman and maintained in the flow-through seawater tanks of the UVI.
 - c) Phase 1A: Diving studies
 - i) Collaborating with S. Pittman at UVI/NOAA worked out a deal to supply batteries in exchange for use of their video capabilities. Obtained video of traps covering 20 days. Analysis is on-going at NOAA Fisheries SEFSC-Galveston.
 - ii) Based on prior pilot study and literature, selected 4 escape vent designs for testing (1¾, 1½, 1 wide by 5¾ in. high, and 1 by 18 in. height) and had vents fabricated. Experimental design included control traps with no vents in each fished string.
 - iii) Installed vents in traps and emplaced traps.
 - iv) As part of planned behavioral studies, carried out diving experiments to determine escape rates from traps during hauling which involved:
 - (1) Hauled traps on 1, 3, 5, 7 day sets in order to assess changes in species composition and trap retention. Initial diving inspection and census of fish in traps (316 traps).
 - (2) Initial haul of traps (360 traps)
 - (3) Stocking traps with fin clipped fish (249 traps and 1287 fish).
 - (4) Entered data into database.
 - (5) Completed initial data analysis of results from diving studies (<http://www.stfavi.org/files/TrapVent1-21.pdf>)
 - d) 4. Field testing. Carried out field-testing of initial vent designs, totaling 165 trap hauls.
 - i) Selected vent designs for Phase 2 field-testing (1⅜ in, 1½ in., or 1 in. wide by 5¾ in. high, and control traps with no vents).
 - ii) Installed vents in traps and transferred traps to initial fishermen/participants.
 - iii) Established arrangements to sample catch.
- 2) **Explain special problems, differences between scheduled and accomplished work, etc.** The only major problem encountered involved fish used in stocking traps. High mortalities occurred when the fish were held for too long. This was resolved by hauling (project fishermen's traps) immediately prior to the haul and stock activities for each string.

Prepared By: D.A. Olsen, PhD
Signature of Principal Investigator

1/31/2011
Date